

Hose, C.

Birds collected in northern Celebes.

(1903)

A-H[ose]

1903

HARVARD UNIVERSITY.



LIBRARY

OF THE

MUSEUM OF COMPARATIVE ZOÖLOGY

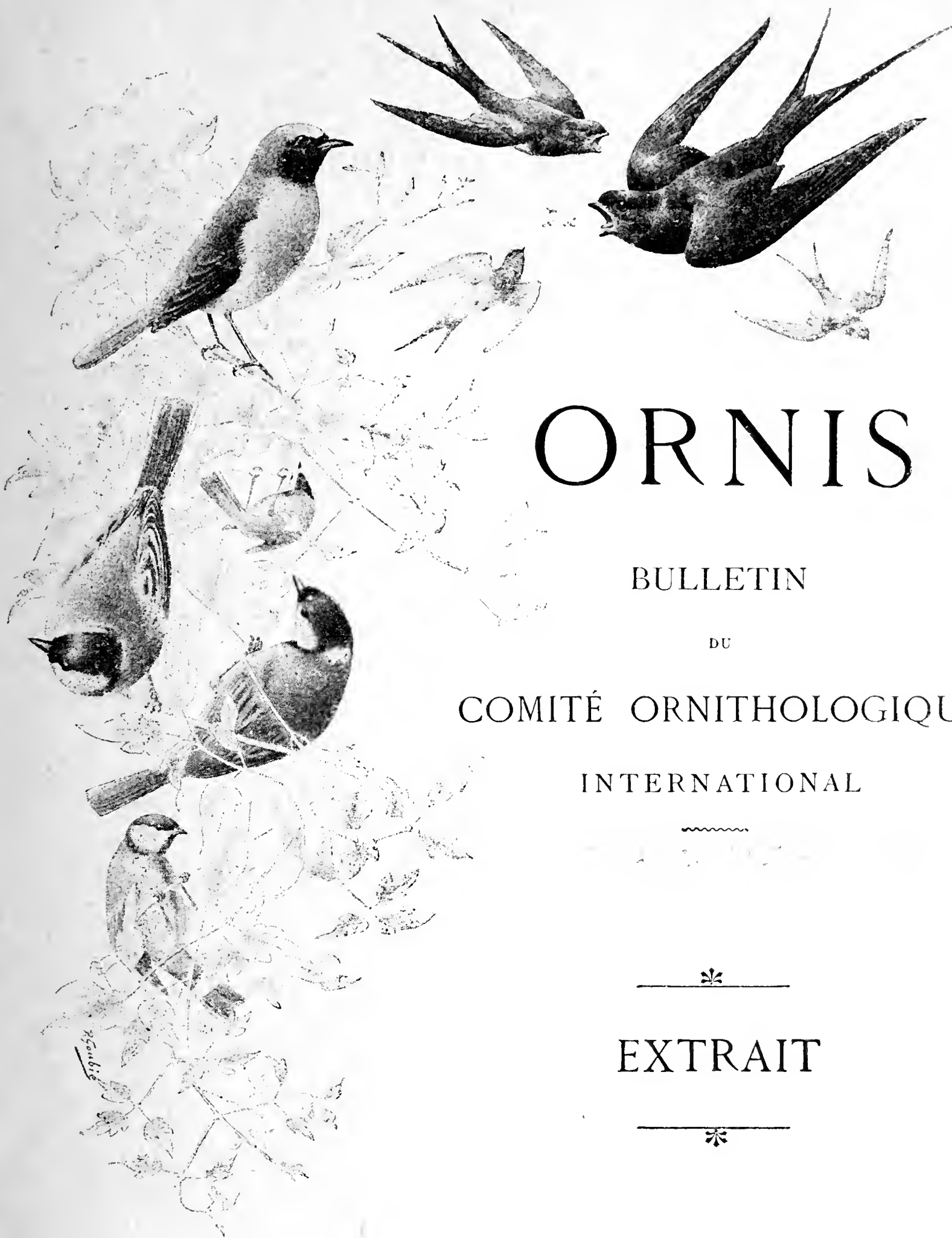
36,770

GIFT OF

Arthur Bangs.

March 20, 1911.

36 770



ORNIS

BULLETIN

DU

COMITÉ ORNITHOLOGIQUE

INTERNATIONAL



EXTRAIT



PARIS

MASSON ET C^{ie}, ÉDITEURS

120, BOULEVARD SAINT-GERMAIN

CONDITIONS DE LA PUBLICATION

L'Ornis paraît par fascicules d'environ 80 pages, accompagnés de figures et de cartes.

4 fascicules paraissant à des époques indéterminées forment un volume. On s'abonne pour un volume.

Prix de l'Abonnement : 10 fr.

AVIS IMPORTANT

- 1° Toutes les communications relatives au Comité ornithologique international permanent, tous les manuscrits des Notes et Mémoires destinés à être publiés dans l'*Ornis*, ainsi que les épreuves corrigées, doivent être adressés au Président du Comité, *M. E. Oustalet, docteur ès sciences, 121^{bis}, rue Notre-Dame-des-Champs, à Paris.*
 - 2° Les épreuves corrigées doivent être retournées par l'auteur *dans les deux jours* qui suivent leur réception.
 - 3° La correspondance peut être adressée au Président, *M. E. Oustalet*, ou au Secrétaire, *M. J. de Claybrooke, 5, rue de Sontay, à Paris.*
 - 4° Les envois de fonds destinés au Comité (dons, subventions, cotisations volontaires, etc.) doivent être adressés au Trésorier, *M. le baron L. d'Hamonville, au château de Manonville, par Noviant-aux-Prés (Meurthe-et-Moselle), France.*
-

LIST OF BIRDS COLLECTED IN NORTHERN CELEBES

BY

CHARLES HOSE

D. Sc., Resident of the Baram District (Sarawak).

The following is a list of the Birds obtained by me during a visit of two months to the northern districts of Celebes, most of which time I spent on Mount Masarang, and especially at Rurukan, a village situated at 4 000 feet up the mountain.

I arrived at Menado on the 2nd October 1895, and at once made arrangements for my journey to Tondano, which is situated in the neighbouring mountains at about 2 600 feet above the sea. The mountains are entirely volcanic, and two of the volcanoes, Klabat and Lokan are active. The scenery is everywhere very beautiful, and I found the neighbourhood of Rurukan an excellent collecting ground. I took with me my Dayak hunters from Baram, who speedily made friends with the Rurukan people, and the consequence was, that I had a small army of natives collecting for me in every direction. My principal object in visiting Celebes was to obtain some rare Mammalia, which were not represented in the British Museum, and not only was I successful in procuring all the species I wanted, but also secured two new kinds of Rats, a new Bat, and a new species of Flower-pecker (*Dicæum*).

ORDER GALLIFORMES.

1. *Gallus gallus*.

Gallus gallus (Linn.), Ogilvie Grant, *Cat. B. Brit. Mus.*, XXII, p. 344 (1893).

Gallus bankiva (Temm.), Wald., *Trans. Zool. Soc.*, IX, p. 86 (1872).

Gallus ferrugineus (Gm.), Meyer et Wiglesw., *Abhandl. K. Zool. Mus. Dresden*, 1894-95, n° 8, p. 16 (1895); iid., *B. Celebes*, p. 667 (1898).

a. ♂ ad. Rurukan (3 500 feet), Sept.

b. ♀ ad. Mount Masarang (3 000 feet), Oct.

I had a long discussion with the native hunters as to whether this Jungle-fowl was an indigenous species to the mountain, or whether it was only a domestic fowl run wild. They were, however, insistent that the species was not domesticated, and as Mr. Ogilvie Grant has identified my specimens as true Jungle-fowl, I believe that we may consider the species to be indigenous to Celebes.

2. *Megapodius cumingi*.

Megapodius Cumingi (Dillwyn), Wald., *t. c.*, p. 29 ; Grant, *Cat. B. Brit. Mus.*, XXII, p. 449 (1893); Meyer et Wiglesw., *t. c.*, p. 10 ; iid., *B. Celebes*, p. 671 (1898).

a. ♀ Juv. Menado, Nov.

Only a single specimen was procured near Menado. This species is also found on the islands off the coast of Northern Borneo, but in Celebes it occurs on the mainland. It is such an exceedingly shy bird that it is seldom shot, and it only moves in the morning and evening. The natives catch the birds by the « Jerat » trap, which consists of a spring formed by bending over a sapling with a noose at the end. In their hunt for Megapodes and other ground-birds, the natives build a low hedge of under-

growth about two feet high across a small island, and at stated distances they leave openings or « eyes » as they call them. The birds have but to fly over this little barrier to be safe, but the native knows well enough that they will not do this, and so he prepares to take them as they run. Over each « eye » in the hedge the sapling is bent; and a small inclined platform has to be crossed: round the latter the noose is laid; as the Megapode is pulled up short by the hedges, instead of flying over the obstacle, the bird foolishly skirts along until it comes to an opening, steps on the platform, which immediately gives way, when the noose is set free and the sapling springs back, suspending the unfortunate quarry in mid-air by the legs.

The cry of the Megapode is decidedly melancholy, and the single note is uttered in monotonous succession. The native name is « Menambun » or « Menimbun », the latter indicating the constructing of a heap.

The birds construct a mound in which the eggs are deposited. I myself, have seen these mounds on Pappan and Karaman Islands; they are built out of the reach of the tide, where the jungle commences, in such places, in fact, where the sand is soft, and the Turtles lay their eggs. In digging down for the Megapodes eggs, one generally finds some rotten logs of drift-wood, which have been washed up by the sea during the N. E. Monsoon. These form the foundation of the mound, which is composed of dark coloured sand mixed with leaves and twigs which fall from the jungle around. As a rule, the mound is well sheltered and indeed almost hidden, as the bird has many enemies, besides his chief one, in the shape of man.

The nesting season is apparently from September to November.

The mounds are of irregular shape and are determined by the character of the neighbouring jungle, according as the latter affords suitable material for their construction. As far as my experience goes, the mounds are from six

to eight feet in diameter and about three feet high. There are certainly burrows or runs inside, and in the formation of these the logs of the foundation undoubtedly play a useful part. Man is not the only enemy of the Megapode, for it is by no means uncommon to find a mound uprooted and dismantled by the wild pigs who forage for the eggs, while many of the young Megapodes, on emerging from the burrows fall victims to the big lizards of the genus *Varanus*. The runs are generally to be found excavated along the side of a log, and I believe that in this way the hens gain admission to the interior of the mound to lay their eggs, though it is quite possible that the entrance is closed when the birds have finished laying; there are several of these « runs » to be seen in a good-sized mound.

3. *Megacephalum maleo*.

Megacephalum maleo (Hartl.), Wald., *t. c.*, p. 87; Ogilvie Grant, *Cat. B. Brit. Mus.*, XXII, p. 472; Meyer et Wigglesw., *t. c.*, p. 46; iid., *B. Celebes*, p. 678 (1898).

a. ♂ ad. Menado, Feb. 11.

This specimen I procured myself on the beach at Menado; and the natives assured me that, near Gorontalo, it is fairly common. However, only saw the species on two occasions.

ORDER COLUMBIFORMES.

FAMILY TRERONIDÆ.

4. *Osmotreron Wallacei*.

Osmotreron griseicauda (nec Gray)!; Wald, *t. c.*, p. 14.

Osmotreron Wallacei, Salvad., *Cat. B. Brit. Mus.*, XXI, p. 42, pl. XI, fig. 2; Meyer et Wigglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 595 (1898).

a. b. ♂ ♀ ad. Menado, Oct., Nov.

c. ♀ ad. Mount Masarang, Oct.

Common in the nutmeg-gardens, and found on the mountains up to 4 000 feet.

5. *Ptilopus Fischeri*.

Ptilopus Fischeri (Brügg.); Salvad., *Cat. B. Brit. Mus.*, XXI, p. 74; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 602 (1898).

a. ♂ ad. Tondano, Oct.

b. c. ♂ ♀ ad. Rurukan (2 500 feet), Sept., Oct.

d. e. ♂ ♀ ad. Mount Masarang (4 000 feet), Oct., Nov.

This was a rare Pigeon, found on the mountain from 2 000 to 4 000 feet.

6. *Ptilopus gularis*.

Ptilopus gularis (Q. et G.) (nec Wagl.), Salvad., *Cat. B. Brit. Mus.*, XXI, p. 78; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 605 (1898).

a. ♀ ad. Tondano, Oct.

b. c. ♂ ad. Rurukan (2 500 feet), Sept., Oct.

Met with in the same places as *P. Fischeri*.

7. *Ptilopus Temmincki*.

Ptilopus Temmincki (Des Murs et Prév.), Salvad., *Cat. B. Brit. Mus.*, XXI, p. 115; Meyer et Wiglesw., *B. Celebes*, p. 613 (1898).

Lamprotreron formosa (Gray); Wald., *t. c.*, p. 82.

a. ♂ *b. c.* ♀ ad. Menado, Nov.

d. ♀ ad. Bantik, Oct.

e. f. ♀ ad. Likupang, Sept.

g. h. ♂ ♀ ad. Rurukan (3 500 feet), Nov.

i. ♀ ad. Mount Masarang (2 600 feet), Nov.

k. ♂ *l. m.* ♀ ad. Mount Masarang (3 000 feet), Sept., Oct., Nov.

n. o. p. q. ♂ ad. Mount Masarang (4 000 feet), Oct.

Common all over the Peninsula, ascending the mountains.

8. *Ptilopus melanospilus*.

Iotreron melanocephala (nec Forst.), Wald., *t. c.*, p. 83.

Ptilopus melanospilus (Salvad.), Salvad., *Cat. B. Brit. Mus.*, XXI, p. 144; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 608 (1898).

a. b. ♂ *c.* ♀ ad. Menado, Oct., Nov.

d. ♀ ad. Bantik, Nov.

e. f. ♂ *g.* ♀ ad. Likupang, Sept., Nov.

h. ♂ ad. Rurukan (3 500 feet), Sept.

i. ♀ ad. Mount Masarang (3 000 feet), Nov.

Found everywhere, exactly as *P. Temmincki*.

9. *Ptilopus xanthorrhous*.

Iotreron melanocephala (pt.), Wald., *t. c.*, p. 83.

Ptilopus xanthorrhous (Salvad.); Salvad., *Cat. B. Brit. Mus.*, XXI, p. 145; Meyer et Wiglesw., *op. cit.*, 1894-95, n° 9, p. 7; iid., *B. Celebes*, p. 611 (1898).

a. ♀ ad. Terona, Great Sangir Island, Oct. 15.

b. ♂ ad. Talaut Island, Oct. 16.

10. *Carpophaga Paulina*.

Carpophaga Paulina (Bp.), Wald., *t. c.*, p. 83; Salvad., *Cat. B. Brit. Mus.*, XXI, p. 188 (1893); Meyer et Wiglesw., *op. cit.*, n° 8, p. 15; iid., *B. Celebes*, p. 617 (1898).

a. ♂ ad. Tondano, Oct.

11. *Carpophaga radiata*.

Carpophaga radiata (Q. et G.); Salvad., *Cat. B. Brit. Mus.*, XXI, p. 210 (1893); Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 622 (1898).

Zonænas radiata; Wald., *t. c.*, p. 84.

a. ♀ ad. Tondano, Oct.

12. **Carpophaga Forsteni.**

Hemiphaga Forsteni (Bp.), Wald., *t. c.*, p. 84.

Carpophaga Forsteni, Salvad., *Cat. B. Brit. Mus.*, XXI, p. 208 (1893); Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 623 (1898).

a. ♀ ad. Likupang, Nov.

b. c. ♀ ad. Tondano Lake (2 000 feet), Oct.

d. ♀ ad. Mount Masarang (3 500 feet), Nov.

I shot two out of a flock flying across the Lake at Tondano. It was rarer on Mount Masarang and at Likupang.

13. **Carpophaga pœcilorrhœa.**

Carpophaga pœcilorrhœa (Brügg.), Salvad., *Cat. B. Brit. Mus.*, XXI, p. 220; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 625 (1898).

a. ♂ ad. Rurukan (2 500 feet), Sept.

b. ♂ ad. Mount Masarang (4 000 feet), Oct.

This bird is certainly not common, and I only met with it on two occasions.

14. **Myristicivora bicolor.**

Myristicivora bicolor (Scop.), Wald., *t. c.*, p. 84; Salvad., *Cat. B. Brit. Mus.*, XXI, p. 228; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 627 (1898).

a. ♂ ad. Menado, Oct.

b. ♂ ad. Likupang, Sept.

c. ♂ ad. Talaut Island, Oct.

Only met with in the cocoa-nut gardens along the coast.

13. *Myristicivora luctuosa*.

Myristicivora luctuosa (Reinw.); Wald., *t. c.* p. 84; Salvad., *Cat. B. Brit. Mus.*, XXI, p. 233; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 631 (1898).

a. b. ♂ ♀ ad. Menado, Oct.

c. d. ♂ ♀ ad. Likupang, Sept.

Found along with the preceding species.

FAMILY COLUMBIDÆ.

16. *Turacoena menadensis*.

Turacoena menadensis (Q. et G.), Wald., *t. c.*, p. 85; Salvad., *Cat. B. Brit. Mus.*, XXI, p. 333; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 635 (1898).

a. ♀ ad. Menado, Nov.

b. ♂ ad. Tondano, Nov.

c. ♀ ad. Mount Masarang (3 000 feet), Oct.

d. e. ♂ ad. Mount Masarang (4 000 feet), Oct.

17. *Macropygia albicapilla*.

Macropygia albicapilla (Bp.), Wald., *t. c.*, p. 85; Salvad., *Cat. B. Brit. Mus.*, XXI, p. 353; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 637 (1898).

a. ♀ ad. Likupang, Sept.

b. ♂ ad. Rurukan (3 500 feet), Sept.

c. d. ♂ ♀ ad. Mount Masarang (3 000 feet), Oct.

e. ♂ ad. Mount Masarang (3 500 feet), Nov.

This and the preceding species were fairly common every-where.

18. *Turtur tigrinus*.

Turtur tigrinus (Temm. et Knip.), Wald., *t. c.*, p. 85; Salvad., *Cat. B. Brit. Mus.*, XXI, p. 440; Meyer et Wiglesw., *t. c.*, p. 15; iid., *B. Celebes*, p. 643 (1898).

- a.* ♀ ad. Menado.
- b.* ♂ juv. Rurukan (2 500 feet), Oct.
- c.* ♂ ad. Mount Masarang (3 500 feet), Oct.

ORDER RALLIFORMES.

19. Hypotænidia striata.

Hypotænidia striata (Linn.), Wald., *t. c.*, p. 95; Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 33 (1894); Meyer et Wiglesw., *t. c.*, p. 18; iid., *B. Celebes*, p. 692 (1898).

Very plentiful in the rushes and reed beds on the lake at Tondano, and in the islands on its surface.

20. Hypotænidia philippinensis.

Hypotænidia philippinensis (Linn.), Wald., *t. c.*, p. 95; Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 39 (1894); Meyer et Wiglesw., *t. c.*, p. 18; iid., *B. Celebes*, p. 694 (1898).

- a.* ♂ ad. Tondano Lake (2 000 feet), Oct.

21. Hypotænidia celebensis.

Hypotænidia celebensis (Q. et G.), Wald., *t. c.*, p. 95; Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 45 (1894); Meyer et Wiglesw., *t. c.*, p. 17; iid., *B. Celebes*, p. 697 (1898).

- a. b.* ♂ ad. Tondano, Nov.
- c.* ♀ ad. Bantik, Nov.
- d.* ♂ ad. Mount Masarang (4 000 feet), Sept.

Lives in the Coffee-Gardens, and is apparently not so much of a « Water » Rail as the two preceding species.

22. *Gymnocrex Rosenbergi*.

Gymnocrex ? Rosenbergi (Schl.), Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 52 (1894); Meyer et Wiglesw., *t. c.*, p. 18; iid., *B. Celebes*, p. 689 (1898).

Rallina Rosenbergi, Wald., *t. c.*, p. 95.

a. ♂ ad. Likupang, Sept.

This is decidedly a rare bird, and I only saw it on one occasion. It is an inhabitant of the older jungle.

23. *Rallina minahasa*.

Rallina minahasa (Wall.), Wald., *t. c.*, p. 95; Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 78, pl. VIII, fig. 2 (1894); Meyer et Wiglesw., *t. c.*, p. 18; iid., *B. Celebes*, p. 699 (1898).

a. ♂ ad. Tondano (2000 feet), Nov.

24. *OEnolimnas isabellina*.

OEnolimnas isabellina (Temm.), Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 86 (1894).

Rallina isabellina, Wald., *t. c.*, p. 96.

Amaurornis isabellina, Meyer et Wiglesw., *t. c.*, p. 17; iid., *B. Celebes*, p. 712 (1898).

a. ♂ ad. Menado, Nov.

b. c. ♀ ad. Likupang, Sept., Nov.

d. ♂ ad. Mount Masarang (3000 feet), Nov.

A land Rail, frequenting old jungle up to 3000 feet.

25. *Poliolimnas cinereus*.

Poliolimnas cinereus (Vieil.), Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 130 (1894).

Ortygometra cinerea, Wald., *t. c.*, p. 130; Meyer et Wiglesw., *t. c.*, p. 17.

Amaurornis cinerea, Meyer et Wiglesw., *B. Celebes*, p. 705 (1898).

a. b. ♂ ad. Tondano Lake (2 000 feet), Oct.

c. d. ♀ ad. Tondano Lake (2 000 feet), Oct.

Very common on the lake during our visit; apparently arriving as a migrant.

26. *Gallinula frontata*.

Gallinula frontata (Wall.), Wald., *t. c.* p. 93; Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 168 (1894); Meyer et Wiglesw., *t. c.*, p. 17; iid., *B. Celebes*, p. 713, pl. XLIII (1898).

a. b. ♂ ad. Tondano Lake (2 000 feet), Oct.

27. *Limnobænus fuscus*.

Limnobænus fuscus (Linn.), Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 146 (1894); Meyer et Wiglesw., *t. c.*, p. 17.

Porzana fusca, Meyer et Wiglesw., *B. Celebes*, p. 701 (1898).

a. ♀ ad. Tondano Lake (2 000 feet), Sept.

28. *Amaurornis phœnicura*.

Amaurornis phœnicura (Forst.), Sharpe, *Cat. B. Brit. Mus.*, XXIII, p. 156 (1894); Meyer et Wiglesw., *t. c.*, p. 17; iid., *B. Celebes*, p. 708 (1898).

Erythra phœnicura, Wald., *t. c.*, p. 94.

a. ♀ ad. Menado, Nov.

b. ♀ ad. Tondano Lake (2 000 feet), Sept.

Not nearly so common as in Borneo.

ORDER PELECANIFORMES.

29. *Dysporus sula*.

Dysporus sula (L.), Wald., *t. c.*, p. 106.

Sula leucogastra (Bodd.) ; Salvad., *Ucc. Papuasia*, III, p. 421 (1882).

Sula leucogaster, Meyer et Wiglesw., *B. Celebes*, p. 892 (1898).

a. ♂ ad. Likupang, Sept.

Procured on the beach at Likupang. There was a little party of four, out of which I shot one.

30. **Fregata aquila.**

Fregata aquila (L.), Meyer et Wiglesw., *t. c.*, p. 20.

a. b. ♀ ad. Menado, Nov.

ORDER PODICIPEDIDIFORMES.

31. **Podiceps gularis.**

Podiceps minor (nec L.), Wald., *t. c.*, p. 105.

Podiceps tricolor, Meyer et Wiglesw., *J. O.*, 1894, p. 253.

Podiceps gularis (Gould), Meyer et Wiglesw., *Abhandl. Mus. Dresden*, 1894-95; iid., *B. Celebes*, p. 917 (1898).

a. b. ♂ ♀ ad. Tondano Lake (2000 feet), Oct.

There were quite a number of these Grebes on the lake, but they were so wild that we could only get a pair. The native name is « Belibes ».

ORDER LARIFORMES.

32. **Hydrochelidon leucoptera.**

Hydrochelidon leucoptera (Meisner et Schinz), Saunders, *Cat. B. Brit. Mus.*, XXV, p. 6 (1896); Meyer et Wiglesw., *B. Celebes*, p. 893 (1898).

a. ♀ imm. Bantik, Sept.

There were a good many of these Terns in the swamp land near the coast

ORDER CHARADRIIFORMES.

33. *Heteractitis brevipes*.

Heteractitis brevipes (Vieill.), Sharpe. *Cat. B. Brit. Mus.*, XXIV, p. 449 (1896); Meyer et Wiglesw., *B. Celebes*, p. 766 (1898).

a. ♀ ad. Menado, Oct.

Dr. Meyer and Mr. Wiglesworth record, from the Talaut Islands (*t. c.*, p. 9) the allied species, *Totanus incanus*.

ORDER ARDEIFORMES.

34. *Ardea sumatrana*.

Ardea sumatrana (Raffl.), Wald., *t. c.*, p. 98; Sharpe, *Cat. B. Brit. Mus.*, XXVI, p. 68; Meyer et Wiglesw., *t. c.*, p. 18; *ibid.*, *B. Celebes*, p. 814 (1898).

a. ♀ imm. Likupang, Nov.

35. *Garzetta nigripes*.

Garzetta nigripes (Temm.), Sharpe, *Cat. B. Brit. Mus.*, XXVI, p. 122 (1898).

Herodias garzetta (nec. Linn.); Meyer et Wiglesw., *B. Celebes*, p. 826 (1898).

a. ♀ ad. Sangir Islands, Oct.

36. *Demiegretta sacra*.

Demiegretta sacra (Gm.), Wald., *t. c.*, p. 100; Sharpe, *Cat. B. Brit. Mus.*, XXVI, p. 137 (1898); Meyer et Wiglesw., *B. Celebes*, p. 819 (1898).

Ardea sacra, Meyer et Wiglesw., *t. c.*, p. 18.

a. ♀ ad. Tondano Lake (2000 feet), Oct.

37. *Butorides javanica*.

Butorides javanica (Horsf.), Wald., *t. c.*, p. 100; Sharpe, *Cat. B. Brit. Mus.*, XXVI, p. 177; Meyer et Wiglesw., *t. c.*, p. 19; iid., *B. Celebes*, p. 851 (1898).

a. ♂ ad. Likupang, Nov.

38. *Butorides amurensis*.

Ardea virescens* var. *amurensis, Schrenck, *Reis. Amurl.*, I, p. 437 (1860).

a. ♂ ad. }
b. ♀ imm. } Tondano Lake (2000 feet), Nov.

It is interesting to find this large race of Green Heron from Celebes, alongside of the small *B. javanica*. The same thing, however, happens in Formosa, Borneo and the Philippines, where, as in Celebes, *B. amurensis* doubtless only occurs on migration.

39. *Bubulcus coromandus*.

Bubulcus coromandus (Bodd.), Sharpe, *Cat. B. Brit. Mus.*, XXVI, p. 217; Meyer et Wiglesw., *t. c.*, p. 19; iid., *B. Celebes*, p. 835 (1898).

a. ♂ ad. Talaut Island, Oct. 17.

40. *Ardetta cinnamomea*.

Ardetta cinnamomea (Gm.), Sharpe, *Cat. B. Brit. Mus.*, XXVI, p. 236; Meyer et Wiglesw., *t. c.*, p. 19; iid., *B. Celebes*, p. 859 (1898).

a. ♀ ad. Tondano Lake, Oct.

41. *Ardetta sinensis*.

Ardetta sinensis (Gm.), Wald., *t. c.*, p. 99; Sharpe,

Cat. B. Brit. Mus., XXVI, p. 227; Meyer et Wiglesw., *t. c.*, p. 19; iid., *B. Celebes*, p. 854 (1898).

a. ♀ ad. Tondano Lake (2 000 feet), Oct.

42. *Nannocnus eurythmus*.

Nannocnus eurythmus (Swinh.), Sharpe, *Cat. B. Brit. Mus.*, XXVI, p. 242.

Ardetta eurythma, Meyer et Wiglesw., *t. c.*, p. 19; iid., *B. Celebes*, p. 856 (1898).

a. ♀ ad. Tondano Lake (2 000 feet), Oct.

ORDER ACCIPITRIFORMES.

43. *Accipiter rhodogaster*.

Accipiter rhodogaster (Schl.), Sharpe, *Cat. B. Brit. Mus.*, I, p. 145 (1874); Meyer et Wiglesw., *B. Celebes*, p. 25 (1898).

Teraspiza rhodogastra, Wald., *t. c.*, p. 109, 33, pl. XI.

a. ♂ juv. Rurukan (3 500 feet), Sept.

44. *Astur trinotatus*.

Astur trinotatus (Bp.), Sharpe, *Cat. B. Brit. Mus.*, I, p. 101.

Erythrospiza trinotata, Wald., *t. c.*, p. 33.

Spilospizias trinotatus, Meyer et Wiglesw., *t. c.*, p. 4; iid., *B. Celebes*, p. 21 (1898).

a. ♂ ad. Rurukan (3 500 feet), Sept.

b. ♀ ad. Mount Masarang (3 000 feet), Sept.

c. d. ♂ ad. Mount Masarang (4 000 feet), Oct.

45. *Astur soloensis*.

Astur soloensis (Lath.), Sharpe, *Cat. B. Brit. Mus.*, I, p. 114, pl. IV, fig. 1 (1874).

Tachyspiza soloensis, Wald., *t. c.*, p. 34.

Tachyspizias soloensis, Meyer et Wigglesw., *t. c.*, p. 4; iid., *B. Celebes*, p. 17 (1898).

a. ♂ imm. Mount Masarang (3 000 feet), Oct.

46. **Spilornis rufipectus**.

Spilornis rufipectus (Gould), Wald., *t. c.*, p. 35; Sharpe, *Cat. B. Brit. Mus.*, I, p. 291; Meyer et Wigglesw., *t. c.*, p. 3; iid., *B. Celebes*, p. 2 (1898).

a. ♀ ad. Tondano, Oct.

b. ♂ ad. Bantik, Oct.

c. ♂ ad. Rurukan, Oct.

d. ♀ juv. Mount Masarang (3 000 feet), Oct.

This species was distributed all over the Peninsula.

47. **Butastur indicus**.

Butastur indicus (Gm.), Sharpe, *Cat. B. Brit. Mus.*, I, p. 297; Meyer et Wigglesw., *t. c.*, p. 4; iid., *B. Celebes*, p. 45 (1898).

Poliornis indicus, Wald., *t. c.*, p. 37.

a. ♀ imm. Rurukan (250 feet), Oct.

b. ♀ imm. Mount Masarang (3 000 feet), Sept.

c. ♂ ad. Mount Masarang (3 000 feet), Nov.

48. **Haliastur girrenera**.

Haliastur girrenera (Vieill.), Sharpe, *Cat. B. Brit. Mus.*, I, p. 345.

Haliastur leucosternus (Gould), Wald., *t. c.*, p. 35.

Haliastur indus girrenera, Meyer et Wigglesw., *B. Celebes*, p. 54 (1898).

a. ♂ ad. Likupang, Oct.

49. *Haliaetus leucogaster*.

Haliaetus leucogaster (Gm.), Sharpe, *Cat. B. Brit. Mus.*, I, p. 307 (1874); Meyer et Wiglesw., *t. c.*, p. 4; iid., *B. Celebes*, p. 40 (1898).

Cuncuma leucogaster, Wald., *t. c.*, p. 35.

a. ♂ ad. }
b. ♀ imm. } Likupang, Sept.

I found a nest of this species on the top of a dead tree near Likupang in September.

ORDER STRIGIFORMES.

50. *Scops menadensis*.

Scops menadensis (Q. et G.), Sharpe, *Cat. B. Brit. Mus.*, II, p. 76; Meyer et Wiglesw., *t. c.*, p. 5; iid., *B. Celebes*, p. 103 (1898).

Ephialtes menadensis, Wald., *t. c.*, p. 40.

a. ♀ ad. Rurukan (2500 feet), Oct.
b. c. ♂ ad. Mount Masarang (3500 feet), Oct., Nov.

51. *Ninox punctulata*.

Ninox punctulata (Q. et G.), Sharpe, *Cat. B. Brit. Mus.*, II, p. 182 (1874); Meyer et Wiglesw., *t. c.*, p. 4.

Athene punctulata, Wald., *t. c.*, p. 38.

Cephaloptynx punctulata, Meyer et Wiglesw., *B. Celebes*, p. 100 (1898).

a. ♀ ad. Mount Masarang (4000 feet), Nov.

52. *Ninox japonica*.

Ninox japonica (Schl.), Wald., *t. c.*, p. 40.

Ninox scutulata (Raffl.), pt.; Sharpe, *Cat. B. Brit. Mus.*, II, p. 156.

Ninox scutulata japonica, Meyer et Wiglesw., *t. c.*, p. 5; iid., *B. Celebes*, p. 95 (1898).

a. ♀ ad. Likupang, Oct.

53. **Strix Rosenbergi.**

Strix Rosenbergi (Schl.), Wald., *t. c.*, p. 41; Sharpe, *Cat. B. Brit. Mus.*, II, p. 298.

Strix flammea Rosenbergi, Meyer et Wiglesw., *t. c.*, p. 5; iid., *B. Celebes*, p. 109 (1898).

a. ♂ ad. Rurukan (2600 feet), Oct.

ORDER CORACIIFORMES.

54. **Coracias Temmincki.**

Coracias Temmincki (Vieill.), Wald., *t. c.*, p. 43; Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 26; Meyer et Wiglesw., *t. c.*, p. 7; iid., *B. Celebes*, p. 309 (1898).

a. ♀ ad. Likupang, Sept.

b. ♂ ad. Rurukan (2500 feet), Oct.

c. ♂ ad. Mount Masarang (4000 feet), Oct.

Found everywhere, frequenting the dead trees on the cleared land.

55. **Halcyon coromandus.**

Halcyon coromandus (Lath.), Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 217.

Callialcyon rufa (Wall.), Wald., *t. c.*, p. 44.

Callialcyon coromanda rufa, Meyer et Wiglesw., *t. c.*, p. 7.

Halcyon coromanda, Meyer et Wiglesw., *B. Celebes*, p. 279 (1898).

a. ♂ ad. Rurukan, Oct.

b. ♂ ad. Likupang, Sept.

Inhabits the forest-jungle.

56. *Pelargopsis melanorhyncha*.

Pelargopsis melanorhyncha (Temm.), Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 97; Wald., *t. c.*, p. 45; Meyer et Wiglesw., *t. c.*, p. 7; iid., *B. Celebes*, p. 269 (1898).

a. ♂ ad. Mount Masarang (3 000 feet), Nov.

I thought it rather unusual to find a *Pelargopsis* so high up as 3 000 feet. In Borneo these King-fishers frequent the rivers and coast-districts of the low country.

57. *Alcedo ispidoides*.

Alcedo ispidoides (Less.), Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 152; Meyer et Wiglesw., *t. c.*, p. 7.

Alcedo moluccensis (Blyth), Wald, *t. c.*, p. 45.

Alcedo moluccana, Meyer et Wiglesw., *B. Celebes*, p. 264 (1898).

a. ♀ ad. Menado, Nov.

58. *Halcyon chloris*.

Halcyon chloris (Bodd.), Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 273, pl. VII, fig. 2; Meyer et Wiglesw., *t. c.*, p. 7; iid., *B. Celebes*, p. 291 (1898).

Sauropatis chloris, Wald., *t. c.*, p. 44.

a. b. ♂ ♀ ad. Menado, Oct.

c. d. ♀ ad. Likupang, Sept., Nov.

e. f. ♂ ad. Mount Masarang (3 000 feet), Oct.

Common on the coast; decidedly rare in the mountain districts.

59. *Monachalcyon monachus*.

Monachalcyon monachus (Gray), Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 294; Meyer et Wiglesw., *B. Celebes*, p. 296 (1898).

Monachalcyon princeps (Forst.), Wald., *t. c.*, p. 43; Meyer et Wiglesw., *t. c.*, p. 7.

a. ♂ ad. Tondano, Oct.

b. ♀ ad. Mount Masarang (4000 feet), Oct.

60. **Monachalcyon cyanocephalus.**

Monachalcyon cyanocephalus (Forst.), Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 295 (1892).

Monachalcyon princeps (Reichenb.), Meyer et Wiglesw., *B. Celebes*, p. 300 (1898).

a. ♀ ad. Tondano (2000 feet), Oct.

b. ♀ ad. Rurukan, Oct.

c. ♀ ad. Rurukan (2500 feet), Sept.

d. e. ♂ ♀ ad. Mount Masarang (3000 feet), Oct.

f. ♂ ad. Mount Masarang (4000 feet).

A bird of the old jungle. By no means rare.

61. **Cittura cyanotis.**

Cittura cyanotis (Temm.), Wald., *t. c.*, p. 44; Sharpe, *Cat. B. Brit. Mus.*, XVII, p. 292; Meyer et Wiglesw., *t. c.*, p. 7; iid., *B. Celebes*, p. 303 (1898).

a. ♂ ad. Tondano, Oct.

b. ♀ ad. Rurukan (2500 feet), Sept.

62. **Cranorrhinus cassidix.**

Cranorrhinus cassidix (Temm.), Wald., *t. c.*, p. 47, fig. 1-4; Ogilvie Grant, *Cat. B. Brit. Mus.*, XVII, p. 377; Meyer et Wiglesw., *t. c.*, p. 7; iid. *B. Celebes*, p. 239 (1898).

a. b. ♂ ad. Likupang, Sept.

c. ♂ ad. Bantik, Nov.

A low country bird, not seen on the mountains.

63. *Penelopides exarhatus*.

Penelopides exarhatus (Temm.), Grant, *Cat. B. Brit. Mus.*, XVII, p. 376.

Buceros exarhatus, Wald., *t. c.*, p. 47, pl. V.

Rhabdotorrhinus exaratus, Meyer et Wiglesw., *B. Celebes*, p. 235 (1898).

a. ♀ ad. Bantik, Nov.

b. ♀ ad. Tondano, Oct.

c. ♀ ad. Tondano (2500 feet), Nov.

d. ♀ ad. Mount Masarang (3500 feet), Oct.

64. *Lyncornis macropterus*.

Lyncornis macropterus (Bp.), Wald., *t. c.*, p. 47
Hartert, *Cat. B. Brit. Mus.*, XVI, p. 605; Meyer et Wiglesw., *t. c.*, p. 8; iid., *B. Celebes*, p. 322 (1898).

a. ♀ ad. Bantik, Oct.

b. ♂ ad. Sangir Island, Oct. 15.

65. *Caprimulgus celebensis*.

Caprimulgus celebensis, Ogilvie Grant, *Ibis*, 1894, p. 519; Meyer et Wiglesw., *B. Celebes*, p. 320, pl. XI (1898).

a. ♂ ad. Rurukan (2500 feet), Sept.

66. *Collocalia esculenta*.

Collocalia esculenta (Linn.), Wald., *t. c.*, p. 46; Hartert, *Cat. B. Brit. Mus.*, XVI, p. 509; Meyer et Wiglesw., *t. c.*, p. 8; iid., *B. Celebes*, p. 334 (1898).

a. ♀ ad. Tondano (2000 feet), Oct.

I did not find, or hear of, any breeding-places of Esculent Swifts. The species may be only a migrant.

67. *Macropteryx Wallacei*.

Macropteryx Wallacei (Gould), Wald., *t. c.*, p. 45 ; Hartert, *Cat. B. Brit. Mus.*, XVI, p. 545 ; Meyer et Wiglesw., *t. c.*, p. 8 ; iid., *B. Celebes*, p. 336 (1898).

a. ♂ ad. Likupang, Nov.

68. *Surniculus Musschenbroeki*.

Surniculus Musschenbroeki (Meyer), Shelley, *Cat. B. Brit. Mus.*, XIX, p. 230 (1891) ; Meyer et Wiglesw., *B. Celebes*, p. 203 (1898).

a. ♂ ad. Bantik, Oct.

69. *Hierococcyx crassirostris*.

Hierococcyx crassirostris, Wald., *t. c.*, p. 116, pl. XIII ; Shelley, *Cat. B. Brit. Mus.*, XIX, p. 239 ; Meyer et Wiglesw., *t. c.*, p. 6 ; iid., *B. Celebes*, p. 182 (1898).

a. ♂ ad. Bantik, Nov.

70. *Cuculus intermedius*.

Cuculus intermedius (Vahl), Shelley, *Cat. B. Brit. Mus.*, XIX, p. 252.

Cuculus canorus (nec Linn.) ; Wald., *t. c.*, p. 115.

a. ♀ juv. Menado, Oct.

b. ♂ ad. Likupang, Sept.

c. ♂ imm. Rurukan (3 500 feet), Oct.

71. *Cacomantis virescens*.

Cacomantis virescens (Brüggem.), Shelley, *Cat. B. Brit. Mus.*, XIX, p. 274 ; Meyer et Wiglesw., *t. c.*, p. 6 ; iid., *B. Celebes*, p. 196 (1898).

Cacomantis sepulcralis (nec Mull.), Wald., *t. c.*, p. 116.

- a.* ♀ ad. Menado, Nov.
 - b.* ♂ ad. Tondano, Oct.
 - c.* ♂ ad. Likupang, Sept.
 - d. e.* ♂ ad. ♀ imm. Rurukan (2 500 feet), Sept.
 - f.* ♀ ad. Mount Masarang (2 000 feet), Nov.
 - g.* ♂ ad. Mount Masarang (3 000 feet), Oct.
 - h.* ♂ ad. Mount Masarang (4 000 feet), Oct.
- Common everywhere.

72. **Rhamphococcyx calorhynchus.**

Rhamphococcyx calorhynchus (Temm.), Shelley, *Cat. B. Brit. Mus.*, XIX, p. 396; Meyer et Wiglesw., *t. c.*, p. 8.

Phoenicophaes calorhynchus, Wald., *t. c.*, p. 52; Meyer et Wiglesw., *B. Celebes*, p. 226 (1898).

- a.* ♀ ad. Great Sangir Island, Oct.
 - b.* ♂ ad. Menado, Oct.
 - c. d.* ♂ ♀ ad. Bantik, Nov.
 - e. f.* ♂ ♀ ad. Tondano, Sept., Oct.
 - g.* ♀ ad. Rurukan (2 500 feet), Oct.
 - h.* ♀ ad. Mount Masarang (3 000 feet), Sept.
- Very common. Found in the coffee gardens.

73. **Pyrrhocentor celebensis.**

Centropus celebensis (Quoy and Gaim.), Shelley, *Cat. B. Brit. Mus.*, XIX, p. 365.

Pyrrhocentor celebensis, Wald., *t. c.*, p. 55; Meyer et Wiglesw., *t. c.*, p. 6; iid., *B. Celebes*, p. 221 (1898).

- a. b.* ♂ ♀ ad. Menado, Oct.
 - c. d.* ♀ ad. Bantik, Nov.
 - e. f.* ♂ ♀ ad. Tondano, Oct.
 - g. h.* ♀ ad. Mount Masarang (3 000 feet), Nov.
- Everywhere plentiful.

74. *Centropus javanicus*.

Centropus javanicus (Dumont), Shelley, *Cat. B. Brit. Mus.*, XIX, p. 354.

Centrococcyx javanicus, Wald., *t. c.*, p. 60.

Centrococcyx bengalensis, Meyer et Wiglesw., *B. Celebes*, p. 213 (1898).

a. b. ♂ ♀ imm. Bantik, Nov.

c. ♂ ad. Mount Masarang (3500 feet), Oct.

d. ♀ ad. Talaut Island, Oct. 16.

75. *Eudynamis melanorhyncha*.

Eudynamis melanorhyncha (S. Müll.), Wald., *t. c.*, p. 53, 112; Shelley, *Cat. B. Brit. Mus.*, XIX, p. 327; Meyer et Wiglesw., *t. c.*, p. 6; iid., *B. Celebes*, p. 203 (1898).

a. b. ♀ ad. Menado, Oct., Nov.

c. d. ♀ Likupang, Sept., Nov.

e. ♂ ad. Bantik, Oct.

f. ♂ ad. Rurukan (2500 feet), Sept.

g. h. i. imm. Mount Masarang (3000 feet), Oct.

76. *Eudynamis honorata*.

Eudynamis honorata (Linn.), Shelley, *Cat. B. Brit. Mus.*, XIX, p. 316.

a. ♀ Likupang, Sept.

This is apparently a new species to the island of Celebes. There can be no question that the specimen is not *E. melanorhyncha* and belongs to the Malayan form, *E. malayana*, which Capt. Shelley does not consider to be distinct from *E. honorata*. It is also not *Eudynamis sanghirensis* of Blasius, which is a form of *E. mindanensis* (cf. Meyer et Wiglesw., *t. c.*, p. 3).

ORDER PSITTACIFORMES.

77. Tanygnathus Mülleri.

Tanygnathus Mülleri (S. Müller et Schl.), Wald. *Trans. Zool. Soc.*, VIII, p. 34 (1872); Salvad., *Cat. B. Brit. Mus.*, XX, p. 430 (1891); Meyer et Wiglesw., *t. c.*, p. 5; iid., *B. Celebes*, p. 140 (1898).

a. ♂ ad. Likupang, Celebes, Sept.

b. ♂ imm. Mount Masarang, Oct.

78. Tanygnathus talautensis.

Tanygnathus talautensis, Meyer et Wiglesw., *t. c.*, p. 2.

a. ♂ imm. Talaut Islands, Oct. 6, 1895.

The British Museum has recently received a pair of adult specimens of this Parrot, which seems to be a well-marked form. My bird is probably immature, as it has the sides of the face green.

79. Prioniturus platurus.

Prioniturus platurus (Temm.), Wald., *t. c.*, p. 32; Salvad., *Cat. B. Brit. Mus.*, XX, p. 445; Meyer et Wiglesw., *t. c.*, p. 5; iid., *B. Celebes*, p. 133 (1898).

a. b. ♂ ad. Talaut Islands, Oct. 16, Nov.

c. ♀ ad. Talaut Islands, Oct. 4.

d. ♂ ad. Bantik, Oct.

e. ♀ ad. Bantik, Nov.

f. ♂ ad. Likupang, Sept.

g. h. ♂ ♀ ad. Mount Masarang, Oct., Nov. (3500 feet).

80. *Prioniturus flavicans*.

Prioniturus flavicans (Cass.), Wald., *t. c.*, p. 34; Salvad., *Cat. B. Brit. Mus.*, XX, p. 416; Meyer et Wiglesw., *t. c.*, p. 5; iid., *B. Celebes*, p. 138, pl. VI (1898).

- a.* ♂ ad. Tondano, Nov.
- b. c.* ♀ ad. Tondano, Oct.
- d.* ♀ ad. Rurukan (2500 feet), Sept.
- e.* ♂ ad. Mount Masarang (3500 feet), Nov.

81. *Psittuteles Meyeri*.

Psittuteles Meyeri (Wald.), Salvad., *Cat. B. Brit. Mus.*, XX, p. 63.

Trichoglossus Meyeri, Wald., *t. c.*, p. 32, pl. IV; Meyer et Wiglesw., *B. Celebes*, p. 124 (1898).

- a. b.* ♂ ad. Menado, Oct.
- c.* ♂ ad. Bantik, Nov.
- d. e.* ♂ ad. Mount Rurukan (2500 feet), Oct.
- f.* ♀ ad. Mount Rurukan (2500 feet), Oct.
- g.* ♀ ad. Mount Masarang (4000 feet), Nov.

Very plentiful in the gardens and found in flocks like a *Palæornis*.

82. *Trichoglossus ornatus*.

Trichoglossus ornatus (Linn.); Wald., *t. c.*, p. 32; Salvad., *Cat. B. Brit. Mus.*, XX, p. 61; Meyer et Wiglesw., *t. c.*, p. 5; iid., *B. Celebes*, p. 120 (1898).

- a. b.* ♂ ad. Menado, Oct., Nov.
- c. d.* ♀ ad. Menado, Oct., Nov.
- e. f.* ♂ ad. Likupang, Sept., Oct.
- g.* ♀ ad. Likupang, Nov.
- h. i.* ♂ ♀ ad. Rurukan (2500 feet), Oct.
- k. l.* ♂ ♀ ad. Mount Masarang (3000 feet), Oct., Nov.

83. Loriculus stigmatus.

Loriculus stigmatus (S. Müll. et Schl.), Wald., *t. c.*, p. 32; Salvad., *Cat. B. Brit. Mus.*, XX, p. 535; Meyer et Wiglesw., *t. c.*, p. 6; iid., *B. Celebes*, p. 158 (1898).

a. b. ♂ ad. Menado, Oct., Nov.

c. ♀ ad. Menado, Oct., Nov.

d. ♀ ad. Tondano, Oct.

e. ♀ ad. Likupang, Sept.

f. ♀ ad. Bantik, Sept.

g. ♀ ad. Rurukan (2500 feet), Oct.

h. i. ♂ ♀ ad. Mount Masarang (4000 feet), Oct.

Common everywhere. Caught by the natives with bird-lime, exactly in the same way as *L. galgulus* in Borneo, a hen bird being used as a decoy.

84. Loriculus exilis.

Loriculus exilis (Schl.), Wald., *t. c.*, p. 32; Salvad., *Cat. B. Brit. Mus.*, XX, p. 521; Meyer et Wiglesw., *B. Celebes*, p. 149 (1898).

a. ♂ ad. Menado, Nov.

85. Microstictus fulvus.

Microstictus fulvus (Q. et G.), Hargitt, *Cat. B. Brit. Mus.*, VIII, p. 490; Meyer et Wiglesw., *t. c.*, p. 6; iid., *B. Celebes*, p. 175 (1898).

Mulleripicus fulvus, Wald., *t. c.*, p. 41.

a. b. ♂ ad. Menado, Oct.

c. ♀ ad. Likupang, Sept.

d. ♂ ad. Tondano, Oct.

e. f. ♂ ad. Mount Masarang (4000 feet), Oct.

g. ♀ ad. Mount Masarang (4000 feet), Oct.

86. *Iyngipicus Temminckii*.

Iyngipicus Temminckii (Malh.); Hargitt, *Cat. B. Brit. Mus.*, XVIII, p. 335; Meyer et Wiglesw., *t. c.*, p. 6; iid., *B. Celebes*, p. 173 (1898).

Yungipicus Temmincki, Wald., *t. c.*, p. 41.

a. ♂ ad., *b. c.* ♀ ad. Menado, Nov.

d. ♀ ad. Likupang, Nov.

e. f. ♂ ad. Rurukan, Oct.

ORDER PASSERIFORMES

87. *Corone enca*.

Corone enca (Horsf.), Wald., *t. c.*, p. 74; Sharpe, *Cat. B. Brit. Mus.*, III, p. 43; Meyer et Wiglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 580 (1898).

a. ♀ ad. Bantik, Nov.

b. ♂ ad. Rurukan (3 500 feet), Sept.

c. ♂ ad. Masarang (3 500 feet), Sept.

88. *Streptocitta torquata*.

Streptocitta torquata (Temm.), Wald., *t. c.*, p. 76; Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 152; Meyer et Wiglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 577 (1898).

a. b. ♂, *c. d.* ♀ ad. Menado, Oct., Nov.

e. ♂ ad. Likupang, Sept.

f. ♀ ad. Rurukan (2 500 feet), Oct.

g. ♂ ad. Mount Masarang (3 000 feet), Nov.

h. ♀ ad. Mount Masarang (4 000 feet), Oct.

89. *Artamus monachus*.

Artamus monachus (Bp.), Wald., *t. c.*, p. 67, pl. VI, fig. 1; Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 10; Meyer et Wiglesw., *t. c.*, p. 10; iid., *B. Celebes*, p. 434 (1898).

a. ♀ ad. Menado, Nov.

b. ♂ ad. Mount Masarang (3 000 feet), Oct.

90. *Artamus leucogaster*.

Artamus leucogaster (Valenc.), Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 5; Meyer et Wigglesw., *t. c.*, p. 9; iid., *B. Celebes*, p. 430 (1898).

Artamus leucorhynchus (Linn.); Wald., *t. c.*, p. 67.

a. ♀ ad. Menado, Oct.

b. c. ♂ ♀ ad. Rurukan, Oct.

d. ♀ ad. Rurukan (2 500 feet), Sept.

e. ♂ ad. Mount Masarang (2 500 feet), Nov.

f. ♀ ad. Mount Masarang (2 600 feet), Oct.

Native name « Burong Gunting ».

91. *Basileornis celebensis*.

Basileornis celebensis (Wall.), Wald., *t. c.*, p. 77; Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 95; Meyer et Wigglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 572 (1898).

a. ♂ ad. Rurukan (2 500 feet), Sept.

b. ♀ ad. Mount Masarang (3 000 feet), Nov.

c. d. ♂ ad. Mount Masarang (4 000 feet), Oct.

Dr. Sharpe tells me that a mistake has taken place in the « key » to the species in his thirteenth volume of the *Catalogue of Birds* (p. 95), where the characters for the two species ought to be reversed, as it is *B. corythaix* which has the long crest, not *B. celebensis*.

92. *Enodes erythrophrys*.

Enodes erythrophrys (Temm.), Wald., *t. c.*, p. 78; Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 192; Meyer et Wigglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 564 (1898).

a. ♀ ad. Menado, Oct.

b. c. ♀ ad., *d.* ♂ Likupang, Nov.

- e.* ♂, *f. g.* ♀ ad. Bantik, Oct., Nov.
- h.* ♂ ad. Tondano, Oct.
- i.* ♂ ad. Mount Masarang (4000 feet), Nov.
- k.* ♀ ad. Mount Masarang (3000 feet), Nov.

93. *Scissirostrum dubium*.

Scissirostrum dubium (Lath.); Wald., *t. c.*, p. 18; Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 193; Meyer et Wiglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 567 (1898).

- a.* ♂ ad. Menado, Oct.
- b.* ♀ ad. Likupang, Nov.
- c. d.* ♂ ♀ ad. Rurukan, Nov.

94. *Calornis sanghirensis*.

Calornis sanghirensis (Salvad.), Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 149; Meyer and Wiglesw., *Abhandl. Mus. Dresden*, 1894-95, p. 6.

Calornis panayensis sanghirensis, Meyer and Wiglesw., *B. Celebes*, p. 557 (1898).

- a. b.* ♂ ♀ ad. Talaut Island, Oct. 16.

95. *Calornis neglecta*.

Calornis neglecta, Wald., *t. c.*, p. 79; Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 148.

Calornis panayensis (Scop.); Meyer and Wiglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 555 (1898).

- a.* ♂ ad. Menado, Oct.
- b.* ♂ imm. Menado, Nov.
- c.* ♀ imm. Likupang, Sept.
- d.* ♂ ad. Rurukan, Oct. 1.
- e.* ♀ ad. Mount Masarang (3000 feet), Oct.
- f.* ♀ ad. Mount Masarang (3500 feet), Oct.
- g.* ♂ ad. Mount Masarang (4000 feet), Nov.

In swarms everywhere, especially among the *Casuarina* trees on the coast.

96. *Oriolus celebensis*.

Oriolus celebensis (Wald.), Sharpe, *Cat. B. Brit. Mus.*, III, p. 203; Meyer and Wigglesw., *t. c.*, p. 14; iid., *B. Celebes*, p. 585 (1898).

Broderipus coronatus (nec Sw.), Wald., *t. c.*, p. 60.

Broderipus celebensis, Wald., *t. c.*, p. 112.

a. b. ♂ ad. Menado, Nov. 2.

c. ♀ ad. Likupang, Sept.

d. ♂ ad. Bantik, Nov.

e. ♂ ad. Tondano, Nov.

f. ♂ ad. Mount Masarang (3000 feet), Nov.

Out of the seven specimens mentioned above, the male from Mount Masarang has tiny yellow tips to the primary-coverts, forming a small speculum. Traces of yellow fringes at the tips of these coverts are also seen in another individual. The black horse-shoe band is also interrupted on the nape, and is plainly broken in three specimens.

97. *Chibia leucops*.

Chibia leucops (Wall.), Sharpe, *Cat. B. Brit. Mus.*, III, p. 241.

Dicrurus leucops, Wald., *t. c.*, p. 70; Meyer and Wigglesw., *t. c.*, p. 10; iid., *B. Celebes*, p. 436 (1898).

a. b. ♂ ♀ ad. Menado, Oct., Nov.

c. ♀ ad. Bantik, Nov.

d. ♀ ad. Likupang, Sept.

e. ♂, *f. g.* ♀ ad. Mount Masarang (3000 feet), Oct., Nov.

98. *Munia Jagori*.

Munia Jagori (Cab.), Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 337 (1890).

Munia formosana Jagori, Meyer and Wiglesw., *B. Celebes*, p. 544 (1898).

a. ♀ ad. Rurukan (3500 feet), Nov.

The distribution of these little black-headed Munias seems to be very curious, for there is no doubt about my specimen being *M. Jagori* and not *M. brunneiceps*, which also occurs in Celebes. They may be introduced into various islands in the same way that *M. brunneiceps* is said to have been introduced into Northern Borneo, where it has nearly ousted the native *M. fuscans* in some localities.

99. *Uroloncha molucca*.

Munia molucca, Wald., *t. c.*, p. 73; Sharpe, *Cat. B. Brit. Mus.*, XIII, p. 367; Meyer and Wiglesw., *Abhandl. Mus. Dresden*, 1894-95, n° 8, p. 14; *id.*, *B. Celebes*, p. 549 (1898).

a. b. ♂ ♀ ad. Menado, Oct.

c. ♂ ad. Tondano, Nov.

d. ♀ ad. Bantik, Sept.

e. ♀ ad. Mount Masarang (3500 feet), Nov.

Dr. Sharpe tells me that he considers that Dr. Meyer and Mr. Wiglesworth are right in naming the Celebean species *M. molucca* and not *M. propinqua* as appears in the *Catalogue*.

The last named bird appears to be confined to Flores. Dr. Sharpe had only one specimen, from Makassar, when he wrote the *Catalogue* in 1890, and he then expressed his doubts on the subject. The series now obtained by me proves that *M. molucca* is the species of Northern Celebes.

100. *Motacilla melanope*.

Motacilla melanope (Pall.), Sharpe, *Cat. B. Brit. Mus.*, X, p. 497.

Motacilla boarula melanope, Meyer and Wiglesw.,

Abhandl. Mus. Dresd., 1894-95, n° 8, p. 14; iid., *B. Celebes*, p. 535 (1898).

a. ♀ imm. Mount Masarang (4 000 feet), Oct.

b. ♂ imm. Talaut Island, Oct. 6.

101. *Anthus Gustavi*.

Anthus Gustavi (Swinh.); Sharpe, *Cat. B. Brit. Mus.*, X, p. 613; Meyer and Wiglesw., *B. Celebes*, p. 538 (1898).

Corydalla Gustavi, Wald, *Trans. Z. S.*, VIII, p. 117.

a. b. ♂ ad. Menado, Oct., Nov.

102. *Cinnyris Grayi*.

Cinnyris Grayi (Wallace), Shelley, *Monogr. Nectar*, p. 91, pl. XXXI.

Nectarophila Grayi, Wald., *t. c.*, p. 71.

Hermotimia Grayi, Meyer and Wiglesw., *B. Celebes*, p. 467 (1898).

a. b. ♂, *c.* ♀ ad. Menado, Oct., Nov.

d. ♂ ad. Rurukan, Nov.

e. f. ♂ ♀ ad. Mount Masarang (3 500 feet), Nov.

g. h. ♂ ad. Mount Masarang (4 000 feet), Oct.

103. *Hermotimia talautensis*.

Hermotinia talautensis, Meyer and Wiglesw., *J. f. O.*, 1894, p. 244; id., *Abhandl. Mus. Dresd.*, 1895, n° 9, p. 5; iid., *B. Celebes*, p. 470, pl. XXVII (1898).

a. ♂ ad. Talaut Island, Oct. 16.

b. ♂ imm. Talaut Island, Oct. 16.

c. ♀ ad. Talaut Island, Oct. 16.

104. *Cinnyris Plateni*.

Cyrtostomus frenatus, *var. nov. Plateni*, W. Blasius, *Zeitschr. Ges. Orn.*, II, p. 289, taf. XII (1885).

Crytostomus frenatus Plateni, Meyer and Wiglesw., *t. c.*, p. 11.

Cyrtostomus frenatus saleyerensis, Meyer and Wiglesw., *B. Celebes*, p. 459, pl. XXVI (1898).

a. b. ♂ ad. Menado, Nov.

c. ♂ ad. Bantik, Nov.

d. ♂ ad. Likupang, Sept.

e. f. ♂ ad. et juv. Tondano, Nov.

g. ♀ ad. Rurukan, Nov.

h. ♂ ad. Mount Masarang (3 000 feet), Sept.

i. ♂ ad. Mount Masarang (4 000 feet), Oct.

The upper surface in Celebean birds is undoubtedly darker and the bill is shorter than in ordinary *C. frenata*, but they seem to me to be matched as regards colour by birds from other localities.

105. **Myzomela chloroptera.**

Myzomela chloroptera, Wald., *t. c.*, p. 117; Meyer and Wiglesw., *B. Celebes*, p. 478 (1878).

a. b. c. ♂ ad. Menado, Oct., Nov.

d. ♀ imm. Rurukan, Nov.

106. **Anthothreptes celebensis.**

Anthreptes celebensis, Shelley, *Monogr. Nect.*, II, p. 319, pl. CIII, fig. 2, 3.

Anthreptes malaccensis celebensis, Meyer and Wiglesw., *t. c.*, p. 11; iid., *B. Celebes*, p. 475 (1898).

a. b. c. ♂ ad. et juv. Menado, Nov.

d. ♀ ad. Likupang, Nov.

e. ♂ ad. Rurukan, Nov.

f. ♂ juv., *g.* ♀ ad. Tondano Lake (2 000 feet), Oct.

h. i. ♂ ad. et juv. Mount Masarang (4 000 feet), Oct.

k. ♂ ad. Sangir Island, Oct. 15.

107. *Dicaeum celebicum*.

Dicaeum celebicum (S. Mull.), Wald., *t. c.*, p. 72; Meyer and Wiglesw., *B. Celebes*, p. 441 (1899).

a. ♂ ad. Celebes.

b.-e. ♂ ad. et juv. Menado, Oct., Nov

f. ♂ ad. Likupang, Nov.

g. ♀ ad. Rurukan, Nov. 1.

h. ♀ ad. Tondano Lake, Nov.

i. ♀ imm. Mount Masarang (3500 feet), Oct.

Found in the coffee-gardens, even to 3500 feet up the mountains.

108. *Dicaeum Hosei*.

Dicaeum Hosei, Sharpe, '*Bull. Brit. Orn. Club*, VI, (1897); Meyer et Wiglesw., *B. Celebes*, p. 448 (1898).

a. ♂ ad. Rurukan, Nov. 5.

b. ♂ imm. Mount Masarang (2500 feet), Nov.

c. ♂ ad. Mount Masarang (4000 feet), Oct.

Also found in the coffee-gardens.

109. *Acmonorhynchus aureolimbatus*.

Prionochilus aureolimbatus (Wall.), Wald., *t. c.*, p. 72; Sharpe, *Cat. B. Brit. Mus.*, X, p. 70.

Acmonorhynchus aureolimbatus, Meyer and Wiglesw., *Abhandl. K. Mus. Dresd.*, 1894-95, p. 10; id., *B. Celebes*, p. 449 (1898).

a. ♂ ad. Menado, Nov.

b. ♀ ad. Bantik, Nov.

c. ♀ ad. Rurukan, Nov.

110. *Zosterops atrifrons*.

Zosterops atrifrons (Wall.), Wald., *t. c.*, p. 72, pl. IX, fig. 3; Meyer and Wiglesw., *B. Celebes*, p. 487 (1898).

- a.* ♂, *b. c.* ♀ ad. Menado, Sept., Nov.
d. ♀ ad. Tondano, Nov.
e. f. ♂ ad. Mount Masarang, Sept., Oct.
g. ♀ ad. Mount Masarang (3000 feet), Nov.
h. ♂ ad. Mount Masarang (4000 feet), Nov.

111. *Lanius lucionensis*.

Lanius lucionensis (Linn.), Wald., *Trans. Zool. Soc. Lond.*, IX, p. 174, pl. XXIX, fig. 1; Meyer et Wiglesw., *B. Celebes*, p. 406 (1898).

- a.* ♂ ad. Mount Masarang (3000 feet), Oct.

112. *Pachycephala sulfuriventer*.

Hyloterpe sulfuriventer, Wald., *Ann. et Mag. N. H.*, (4), IX, p. 399 (1872); iid., *Trans. Zool. Soc. Lond.*, IX, p. 179.

Pachycephala sulfuriventer, Meyer et Wiglesw., *B. Celebes*, p. 394, pl. XVIII (1898).

- a.* ♂. *b. c.* ♀ ad. Bantik, Sept.
d. ♀ ad. Tondano.
e. ♂ ad. Rurukan (2500 feet), Sept.

113. *Phylloscopus borealis*.

Phylloscopus borealis (Naum.), Seebohm, *Cat. B. Brit. Mus.*, V, p. 40; Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 8, p. 13; iid., *B. Celebes*, p. 527 (1898).

- a.* ad. Gunong Api, Rurukan, Nov. 4.

114. *Locustella fasciolata*.

Locustella fasciolata (Gray), Seebohm, *Cat. B. Brit. Mus.*, V, p. 109; Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 9, p. 6; iid., *B. Celebes*, p. 524 (1898).

- a.* ♂ ad. Likupang, Sept.

115. *Acrocephalus orientalis*.

Acrocephalus orientalis (Temm. et Schl.), Seebohm, *Cat. B. Brit. Mus.*, V, p. 97; Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 8, p. 13; iid., *B. Celebes*, p. 521 (1898).

a. ♀ ad. Menado, Nov.

116. *Phyllergates Riedeli*.

Phyllergates Riedeli, Meyer et Wiglesw., *Abhandl. K. Zool. Mus. Dresd.*, 1894-95, n° 8, p. 13; iid., *B. Celebes*, p. 519, pl. XXXIV (1898).

a. ♂ ad. Mount Masarang (3500 feet), Nov.

This species seems to be very well marked, as it wants the pale eyebrow of *P. cinereicollis*, and lacks the grey on the back of the neck, which is olive-brown like the back. The ear-coverts also are brown instead of grey.

117. *Cisticola exilis*.

Cisticola exilis (Vig. et Horsf.), Sharpe, *Cat. B. Brit. Mus.*, VIII, p. 269; Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 8, p. 13; iid., *B. Celebes*, p. 517 (1898).

a. ♂ ad. Rurukan, Nov. 2.

118. *Monticola solitaria*.

Monticola solitaria (P. L. S. Mull.), Seebohm, *Cat. B. Brit. Mus.*, V, p. 319.

Monticola cyanus solitarius, Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 8, p. 13.

Petrophila cyanus solitaria, Meyer et Wiglesw., *B. Celebes*, p. 512 (1898).

a. ♀ imm. Menado, Oct.

119. *Turdinus celebensis*.

Turdinus celebensis (Strickl.). Sharpe, *Cat. B. Brit. Mus.*, VII, p. 542.

Trichastoma celebensis, Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1896, n° 2, p. 18; iid., *B. Celebes*, p. 504 (1898).

a. ♂ ad. Bantik, Sept.

b. c. ♂ ad. Mount Masarang (4 000 feet), Oct.

120. *Lalage leucopygialis*.

Lalage leucopygialis, Wald., *t. c.*, p. 69; Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 8, p. 9; iid., *B. Celebes*, p. 425 (1898).

a. ♂ juv. Menado, Nov.

b. ♂ ad., *c.* ♀ imm. Mount Masarang (3 000 feet), Oct.

121. *Artamides Temmincki*.

Artamides Temmincki (S. Mull.), Sharpe, *Cat. B. Brit. Mus.*, IV, p. 15.

Graucalus Temmincki, Wald., *Trans. Zool. Soc.*, VIII, p. 68, 113, pl. XII; Meyer et Wiglesw., *t. c.*, p. 9; iid., *B. Celebes*, p. 445 (1898).

a. b. ♂ ad. Mount Masarang (4 000 feet), Oct.

122. *Graucalus leucopygius*.

Graucalus leucopygius (Bp.), Wald., *t. c.*, p. 68; Sharpe, *Cat. B. Brit. Mus.*, IV, p. 33; Meyer et Wiglesw., *t. c.*, p. 9; iid., *B. Celebes*, p. 413, pl. XXI (1898).

a. ♀ ad. Menado, Oct.

b. c. ♂ ad. Tondano (2 000 feet), Sept.

123. Edoliisoma morio.

Edoliisoma morio (S. Mull.), Sharpe, *Cat. B. Brit. Mus.*, IV, p. 54; Meyer et Wiglesw., *t. c.*, p. 9; iid., *B. Celebes*, p. 449, pl. XXII (1898).

Volvocivora morio, Wald., *t. c.*, p. 69, pl. VIII, fig. 4.

- a.* ♂ imm. Bantik, Oct.
- b. c.* ♂ imm. Likupang, Nov.
- d.* ♂ ad. Rurukan (2500 feet), Sept.
- e.* ♂ imm. Rurukan (2500 feet), Sept.
- f. g.* ♂ ad. et imm. Mount Masarang (3000 feet), Oct.

124. Rhipidura nigritorquis.

Rhipidura nigritorquis (Vigors), Sharpe, *Cat. B. Brit. Mus.*, IV, p. 324.

- a.* ♂ ad. Menado, Nov.

125. Stoparola septentrionalis.

Stoparola septentrionalis, Buttikofer, *Notes Leyden Mus.*, XV, p. 469 (1893); Meyer et Wiglesw., *t. c.*, p. 9; iid., *B. Celebes*, p. 374 (1898).

- a.* ♀ ad. Menado, Nov.
- b. c.* ♂ ad. Likupang, Sept.
- d.* ♀ ad. Mount Masarang (3000 feet), Nov.
- e.* ♀ ad. Mount Masarang (3000 feet), Oct.

126. Siphia omissa.

Siphia omissa, Hartert, *Nov. Zool.*, 1896, p. 74, 157, 171, 172; 1897, p. 158.

Siphia banyumas (Horsf.); Meyer et Wiglesw., *B. Celebes*, p. 368, pl. XIV (1898).

- a.* ♀ ad. Menado, Nov.
- b.* ♂ ad. Likupang, Sept.
- c.* ♀ ad. Mount Masarang (4000 feet), Oct.

127. *Zeocephus talautensis*.

Zeocephus talautensis, Meyer et Wiglesw., *J. f. O.*, 1894, p. 243; id., *Abh. Mus. Dresd.*, 1894-95, n° 9, p. 4; iid., *B. Celebes*, p. 382, pl. XVI (1898).

- a.* ♀ ad. Talaut Island, Oct. 16.

128. *Culicicapa helianthea*.

Culicicapa helianthea (Wall.), Sharpe, *Cat. B. Brit. Mus.*, IV, p. 370; Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 8, p. 9; iid., *B. Celebes*, p. 387 (1898).

Myialestes helianthea, Wald., *t. c.*, pl. VII, fig. 1.

- a.* ♂ ad. Likupang, Sept.
- b. c.* ♂ ad. Tondano, Oct.
- d.* ♂ ad. Mount Masarang (4000 feet), Oct.

129. *Hypothymis puella*.

Hypothymis puella (Wall.), Wald., *t. c.*, p. 66, pl. VII; Sharpe, *Cat. B. Brit. Mus.*, IV, p. 277; Meyer et Wiglesw., *Abh. Mus. Dresd.*, 1895, n° 8, p. 9; iid., *B. Celebes*, p. 376 (1898).

- a.* ad. Celebes, Oct.
- b.* ♂ ad. Rurukan (3500 feet), Oct.
- c. d.* ♀ ad. Mount Masarang (4000 feet), Oct.

130. *Muscicapa griseisticta*.

Muscicapa griseisticta (Swinh.), Sharpe, *Cat. B. Brit. Mus.*, IV, p. 153.

Hemichelidon griseisticta, Wald., *Trans. Zool. Soc.*, VIII, p. 66; Meyer et Wigglesw., *Abh. Mus. Dresd.*, 1898, n° 8, p. 8; iid., *B. Celebes*, p. 363 (1898).

a. b. ♂ ♀ ad. Menado, Nov.

131. *Hirundo javanica*.

Hirundo javanica (Sparrm), Wald., *t. c.*, p. 66; Sharpe, *Cat. B. Brit. Mus.*, X, p. 142; Meyer et Wigglesw., *t. c.*, p. 8; iid., *B. Celebes*, p. 358 (1898).

a. ♀ ad. Tondano, Oct.

132. *Pitta celebensis*.

Erythropitta celebensis (Forst.), Wald., *t. c.*, p. 62.

Pitta celebensis, Schl., *Cat. B. Brit. Mus.*, XIV, p. 436; Meyer et Wigglesw., *t. c.*, p. 13; iid., *B. Celebes*, p. 340 (1898).

a. ♀ imm. Rurukan (2500 feet), Sept.

b. ♀ ad. Rurukan (3500 feet), Nov.

c. ♂ ad. Mount Masarang (4000 feet), Oct.

I cannot conclude this paper without recording my great appreciation of the kindness which was shown me by all the Dutch officials in Celebes. I must especially mention, H. E. The Resident of Menado, Heer Jellesma, who did everything in his power to forward my expedition, and Heer Cambier, the controlleur of Tondano.

Traité de Zoologie, par M. Edmond PERRIER, membre de l'Institut, professeur au Muséum d'histoire naturelle. Paris, 1893. 2 vol. gr. in-8.

- FASCICULE I. **Zoologie générale**, avec 458 figures dans le texte.. 12 fr.
FASCICULE II. **Protozoaires et Phytozoaires**. Avec 243 gravures dans le texte..... 10 fr.
FASCICULE III. **Arthropodes**, avec 278 gravures..... 8 fr.
FASCICULE IV. **Vers, Mollusques**, avec 566 gravures. Paris, 1896.. 16 fr.
FASCICULE V. **Tuniciers, Vertébrés** (*Sous presse*).

Le Mouvement, par E.-J. MAREY, membre de l'Institut et de l'Académie de médecine, professeur au Collège de France, directeur de la station physiologique. Paris, 1894. 1 vol. petit in-8 avec 214 figures et 3 planches..... 6 fr.

Le Vol des Oiseaux (physiologie du mouvement), par M. E.-J. MAREY. Paris, 1889. 1 vol. grand in-8 avec 164 figures..... 10 fr.

Les Colonies animales et la formation des organismes, par Edmond PERRIER, membre de l'Institut, professeur au Muséum d'histoire naturelle. *Deuxième édition*, avec 2 planches et 153 figures dans le texte. 1 fort volume gr. in-8..... 18 fr.

Précis de Zoologie, par le D^r G. CARLET, professeur à la Faculté des sciences et à l'Ecole de médecine de Grenoble. 4^e édition entièrement refondue, par Rémy PERRIER, ancien élève de l'Ecole normale supérieure, agrégé et docteur ès sciences naturelles. Paris, 1896. 1 vol. in-8, avec 781 figures dans le texte..... 9 fr.
Cartonné, toile souple..... 10 fr.

Annales des Sciences naturelles, comprenant la zoologie, la botanique, l'anatomie et la physiologie comparées des deux règnes et l'histoire des corps organisés fossiles.

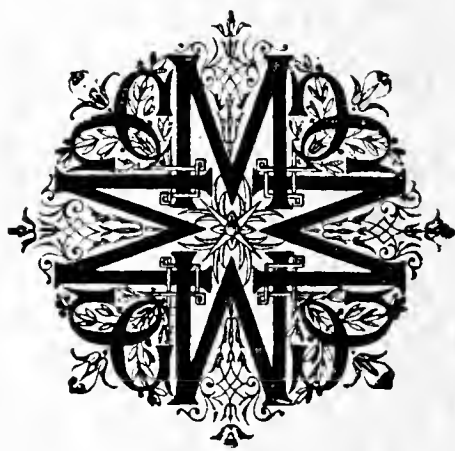
- Zoologie**, publié par M. Alph. MILNE-EDWARDS, membre de l'Institut, directeur du Muséum d'histoire naturelle.
Chaque année, 2 vol. in-8 avec planches..... 30 fr.
Botanique, publié par M. VAN TIEGHEM, membre de l'Institut, professeur au Muséum d'histoire naturelle.
Chaque année. 2 vol. in-8 avec planches..... 30 fr.

La Nature, Revue illustrée des Sciences et de leurs applications aux arts et à l'industrie, fondée en 1873 par Gaston TISSANDIER. Directeur : Henri DE PARVILLE.

Le numéro contient en outre, au moment de sa publication, un supplément hebdomadaire de 4 pages, publié sous les titres : La Semaine, Informations, Boîte aux lettres, Petites inventions, Bibliographie, Bulletin météorologique et Chronique météorologique. Chaque année de la publication forme deux beaux volumes grand in-8.

Prix de l'abonnement annuel :

Paris, Seine et Seine-et-Oise.....	20 fr.	»
Départements.....	25 fr.	»
Union postale.....	26 fr.	»
Le numéro.....	0 fr.	50



Gaylord Bros.
Makers
Syracuse, N. Y.
PAT. JAN. 21, 1908

